

Title (en)

METAL ON PLASTIC FILMS WITH ADHESION-PROMOTING LAYER

Title (de)

METALLFOLIE AUF PLASTIKFILM UNTER VERWENDUNG VON ADHASIONSVERBESSERUNGSBESCHICHTUNG

Title (fr)

PELLICULES EN METAL SUR PLASTIQUE A COUCHE DE PROMOTION DE L'ADHESION

Publication

EP 0686093 A4 19960228 (EN)

Application

EP 94908723 A 19940204

Priority

- US 9401320 W 19940204
- US 1444793 A 19930205

Abstract (en)

[origin: WO9418003A1] The adhesion to plastic substrates (112) of thick layers of functional metals (116) having an oxide heat of formation that is greater than -40,000 calories/gram atom of metal, such as silver, copper, gold, and the like, is improved if a thin layer of a metal having an oxide heat of formation of less than -50,000 calories/gram atom of metal is present as an adhesion-promoting primer layer metal has a melting point greater than 1100 DEG C, it should be present as the metal or as a substoichiometric oxide. When the primer layer metal (114) has a melting point less than 1100 DEG C, it may be present as the metal, as a substoichiometric oxide, or as a full stoichiometric oxide. Processes for preparing these materials using sputter-depositing and reflectors incorporating these materials are also disclosed.

IPC 1-7

B32B 31/00; B32B 33/00

IPC 8 full level

B32B 15/09 (2006.01); **C23C 14/02** (2006.01); **C23C 14/08** (2006.01); **C23C 14/20** (2006.01); **C23C 14/34** (2006.01); **C23C 28/00** (2006.01); **H05K 1/03** (2006.01); **H05K 3/38** (2006.01)

CPC (source: EP US)

C23C 14/024 (2013.01 - EP US); **C23C 14/205** (2013.01 - EP US); **H05K 1/0313** (2013.01 - EP US); **H05K 3/388** (2013.01 - EP US); **Y10S 428/913** (2013.01 - EP US); **Y10T 428/12569** (2015.01 - EP US); **Y10T 428/1259** (2015.01 - EP US); **Y10T 428/12806** (2015.01 - EP US); **Y10T 428/12819** (2015.01 - EP US); **Y10T 428/12826** (2015.01 - EP US); **Y10T 428/12993** (2015.01 - EP US); **Y10T 428/31681** (2015.04 - EP US); **Y10T 428/31786** (2015.04 - EP US)

Citation (search report)

- [X] US 4368945 A 19830118 - FUJIMORI YOSHITUGU [JP], et al
- [X] US 4861680 A 19890829 - MEYER STEPHEN F [US], et al
- [X] EP 0226993 A1 19870701 - PPG INDUSTRIES INC [US]
- [PX] DE 4322512 A1 19940120 - GTE PROD CORP [US]
- [A] US 4828346 A 19890509 - JACOBSEN DONALD V [US], et al
- [A] US 5153054 A 19921006 - DEPAUW JEAN-MICHEL [BE], et al
- [A] GB 1307642 A 19730221 - ASAHI GLASS CO LTD
- See references of WO 9418003A1

Designated contracting state (EPC)

BE DE FR GB IT NL

DOCDB simple family (publication)

WO 9418003 A1 19940818; DE 69425488 D1 20000914; DE 69425488 T2 20010111; EP 0686093 A1 19951213; EP 0686093 A4 19960228; EP 0686093 B1 20000809; JP 3637057 B2 20050406; JP H08510009 A 19961022; TW 294630 B 19970101; US 5589280 A 19961231

DOCDB simple family (application)

US 9401320 W 19940204; DE 69425488 T 19940204; EP 94908723 A 19940204; JP 51826594 A 19940204; TW 83101913 A 19940305; US 1444793 A 19930205